considered to be within normal limits. Inasmuch as these changes are dependent upon alterations that persist as the remains of past infections of the respiratory tract, it is obvious that a careful history with special reference to all infections is necessary if diagnostic errors are to be avoided. Even careful histories must be considered with judgment, as minor infections are soon forgotten by many, and among the less intelligent even more significant illnesses are not recalled. Failure properly to evaluate these deviations from a fixed standard often lead to unwarranted diagnosis of disease and even less justifiable treatment. With a proper appreciation of the widest variations that the normal may present the informed clinician can better understand the findings of the roentgenologist, and each coöperating with the other is less liable to error. D'Espine's sign as indicative of enlarged tracheo-bronchial lymph nodes is of little value. Recognition of and familiarity with these data is of cardinal and practical importance to every patient. Without a proper appreciation of these facts no intelligent differentiation between a normal and an abnormal respiratory tract can be made.

The Use of the Carbon Arc Light in the Prevention and Cure of Rickets.—HESS and UNGER (*Jour. Am. Med. Assn.*, 1922, **78**, 1596) experienced that in the winter, and especially in the early spring, rickets develops on every diet. It is generally mild and overlooked, but if routine clinical, roentgenological, and chemical examinations are carried out, it is surprising what a small proportion of bottle-fed infants will be found to have escaped rickets by March or April. They have also found that rickets is not limited to the artificially fed infant. A recent survey of breast-fed infants showed that by the end of March about one-half showed definite roentgenological evidence of rickets. The infants that they treated by the carbon arc light had been on standard diets, including raw certified milk, dry milk, malt soup and protein milk. All received orange juice daily. Huldschinsky and others had used the mercury vapor quartz lamp for this purpose. The rays which this lamp emits are rich in ultraviolet, but its spectrum differs markedly from that of the sun, in that it is discontinuous, and that much of its ultraviolet rays are of wave lengths considerably shorter than those of the sun. For these reasons it was deemed worth while to try the effect of the white flame carbon arc lamp, which more nearly approaches the sun's spectrum. The fact that this lamp is very rich in luminous rays was another reason for testing its therapeutic value, for it seemed that it might provide illumination at the same time as therapy. The infants entirely naked were placed at a distance, varying from three to nine feet from the lamp, and were provided with spectacles or other covering for the eyes. This form of irradiation does not lead to any tanning of the skin. This shows that pigmentation is not an essential factor in heliotherapy of rickets. In every instance there was a subsidence of the rickets, which was evident by roentgen ray often after daily exposures for only two weeks. This consisted in calcification of the lower epiphyses of the radius and the ulnar, which increased progressively as the treatment was continued. Accompanying these changes there was the constant increase in the inorganic phosphate of the blood, which in some cases had a tendency to fall after heliotherapy was discontinued. The carbon arc lamp was found in the laboratory as well as in the clinic to be a very effective agent in the prevention and cure of rickets. It is comparatively inexpensive, and its rays are not irritating to the skin, so that it can be used for hours with perfect safety. The use of the lamp has the advantage over heliotherapy in that it can be used in the winter months when the tendency toward the development of rickets is the greatest, and when it is not possible to apply heliotherapy on account of the impossibility of exposing the body of the child to the direct rays of the sun at this season of the year.

The X-ray Findings in the Normal Chest of the Child.—PANCOAST, DUNHAM and BAETJER (*Report of the Committee on Medical Research, Natl. Tuberculosis Assn.*, May 6, 1922) found that the normal chest of the child is subject to such wide variations from the roentgenologic point of view as to be beyond the possibility of exact description. The conglomerate shadow, commonly called the hilum shadow, when found lying entirely within the inner third or zone of the lung can be entirely disregarded, or regarded as normal except where it is made up of a solid mass of homogeneous shadow, showing undoubted evidence that it represents a growth or mediastinal pleurisy. Calcified nodes at the root of the lung, without evidence of lung disease, are of no significance except as possible evidence of some healed inflammatory condition, possibly but not necessarily tuberculosis. They are a common finding in the normal chest. In the normal lung the bronchial trunk shadows are not visible in the extreme apical regions. For convenience of description the remainder of the lung is divided into three vertical zones, extending outward from the lateral border of the spinal shadow to the lateral chest wall. The inner zone contains the root shadows. The midzone contains the trunk shadows, gradually fading out into their final subdivisions. The peripheral zone contains radiating lines from these and fading off before the periphery is reached. Where in the midzone or peripheral zone these shadows do not disappear in the characteristic fashion described, the appearance may be evidence of a variety of conditions, past or present, of an inflammatory nature or otherwise. It may accompany a tuberculous process, but is not necessarily indicative of tuberculosis. They feel that the use of such terms as peribronchial tuberculosis and parenchyma tuberculosis should not be used in the interpretation of roentgenograms of the chest. Also they feel that until corroborated by laboratory or clinical findings the use of such terms as active and quiescent should not be definitely applied to evident lesions demonstrated on plates.

The Diagnosis, Prognosis and Early Treatment of Poliomyelitis.—LOVETT (*Jour. Am. Med. Assn.*, 1922, 78, 1607) points out that it is commonly known that many cases of poliomyelitis are overlooked in the early stages, being incorrectly diagnosed as all sorts of febrile affections, and the diagnosis is usually cleared up only after the paralysis develops. Laboratory diagnosis can be made in the early stages by spinal tapping. The fluid in the acute stages of the disease is clear and colorless, and does not show great increase of pressure. In the first week there is an increase in the cells, due to mononuclear cells of various types, of which the lymphocyte is the most common. The cells may increase to as many as from 1000 to 2000 per cubic millimeter. The globulin reaction, which is weak at first, increases to its maximum by the end of the third week. The only difficulty in the laboratory diagnosis is between poliomyelitis and tuberculous meningitis. The diagnosis from clinical symptoms is very important as the facilities for laboratory examination are not always available. This cannot be made from the history. Trauma cannot cause this disease. A moderate or high fever occurring suddenly without known cause and accompanied by symptoms in the gastrointestinal or respiratory tracts is suspicious, especially between June and November. The most suspicious symptom of all is stiffness at the back of the neck in attempts to flex the head, but there is nothing really characteristic about the attack. Occasionally the part that will be paralyzed is affected by prickling or numbness. The paralysis may occur in one or two hours or three or four days from the beginning of the attack. After the first few days the diagnosis is very often only too obvious to those who are familiar with the fundamentals of the affection.

OBSTETRICS

UNDER THE CHARGE OF

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The Results of Cesarean Section from 1911 to 1920 Inclusive.—Holland has undertaken to collect the records of the hospitals of Great Britain regarding Cesarean section in ten years. His totals are: for contracted pelvis, 33,372; for eclampsia and toxemia, 231; for antipartum hemorrhage, 208; for other conditions, 386. In Cesarean section for contracted pelvis, when the mother was not in labor and therefore no attempt to deliver had been made, the maternal mortality was 11.6 per cent; early in labor, 1.8 per cent; late in labor, 10 per cent; after induction of labor, 14 per cent, and after attempts at delivery, 27 per cent. The fetal mortality of cases where forceps had been tried was 27 per cent and the early mortality of children delivered by section after considerable labor was nearly 11 per cent. As might be expected, peritonitis and sepsis were the principal causes of the mother's death. There were 33 cases of operation through the lower uterine segment: 12 of them were extraperitoneal operations with 4 deaths; 20 transperitoneal operations with 1 death. In 46 cases of Cesarean hysterectomy there were 8 deaths. When these cases are analyzed it is found that the cases were severely complicated before operation. With all possible deduction of hysterectomy the maternal mortality of Cesarean operation in cases not in labor was 1.4 per cent; early in labor, 1.8 per cent; late in labor, 9.4 per cent, and after attempt at delivery, 26.5 per cent. The fetal mortality at the time of operation was 3.9 per cent and later on among these children a mortality of 4.2 per cent; the later the operation is performed in labor the higher the fetal death rate, and when the operation is done after the forceps has failed the fetal death rate is very high. It is interesting to note that the maternal mortality of abdominal Cesarean section as indiscriminately practised for eclampsia is 32 per cent, and in eclampsia and toxemia fetal mortality is 50 per cent among infants dying at the operation and those surviving. The writer speaks of other toxemias of pregnancy and those causing eclampsia which is to our mind a confusion of terms and ideas. Thus in 29 cases of what he calls the albuminuria of pregnancy, a maternal mortality after Cesarean section was 20 per cent. The statistics would have been more valuable if eclampsia and what he calls other toxemias had been placed under one head. In placenta previa the statistics are somewhat confused; thus he speaks of *complete* and *central* with a mortality of 14 per cent; uncomplicated, etc., with a mortality of 9.3 per cent, and "placenta previa" 18 cases, 1 death. Obviously these statistics are not clear. Among his cases were 5 Cesarean hysterectomys with no mortality. The fetal mortality in these cases was low, 7 per cent at labor. Among the children surviving the operation and remaining for some time in the hospital the mortality was 22.3 per cent. Unquestionably the fetal mortality of placenta previa treated by Cesarean section was comparatively low. On using the term accidental hemorrhage, probably to include accidental separation of the normally implanted placenta, the statement is not clearly defined. In 66 cases treated by Cesarean section the maternal mortality was 27 per cent. It is difficult to imagine what concealed and revealed hemorrhage may be, but this is mentioned together with concealed hemorrhage and 68 cases of accidental hemorrhage. When Cesarean hysterectomy and the ordinary simple Cesarean section are compared, or these cases of hemorrhage, the mortality of the former is four times as great as that of the latter. This may be because these cases were complicated at operation. Eighty-six per cent of the children in these anomalous hemorrhages were lost. In the miscellaneous cases of various types, numbering in all 366, mortality varied in accordance with the severity of the complication for which the operation was done. The paper is interesting and valuable for the large number of cases studied and the painstaking effort made to arrive at the true position of Cesarean section as practised at present in the British Empire.

Galactocele.—GRYNFELTT and TZÉLÉPOGLOU (*Gynéc. et obst.*, 1922, 5, 222) publish a well-illustrated and comprehensive paper upon this subject. They find that the condition known as galactocele is not a primary pathological condition. It is a secondary result of various pathological processes in the mammary gland. From the standpoint of anatomy, several varieties may be distinguished. One, the ectasic, which arises from the dilatation of the milk ducts; second, the interstitial, which is formed by the excessive secretion retained in the connective tissue around the gland substance; third, the adenogalactocele, which is an adenocystic tumor containing milk; fourth, the pyogalactocele, which is a chronic abscess in the milk duct and surrounding tissue. From the standpoint of pathology these conditions may arise in two ways: First, from inflammation, which in accordance with its nature, intensity, location and duration, creates the conditions